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NEWS	4	DEC 23	New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/USPAT2
NEWS	5	JAN 13	IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
NEWS	6	JAN 13	New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to INPADOC
NEWS	7	JAN 17	Pre-1988 INPI data added to MARPAT
NEWS	8	JAN 17	IPC 8 in the WPI family of databases including WPIFV
NEWS	9	JAN 30	Saved answer limit increased
NEWS	10	JAN 31	Monthly current-awareness alert (SDI) frequency added to TULSA
NEWS	11	FEB 21	STN AnaVist, Version 1.1, lets you share your STN AnaVist visualization results
NEWS	12	FEB 22	Status of current WO (PCT) information on STN
NEWS	13	FEB 22	The IPC thesaurus added to additional patent databases on STN
NEWS	14	FEB 22	Updates in EPFULL; IPC 8 enhancements added
NEWS	15	FEB 27	New STN AnaVist pricing effective March 1, 2006
NEWS	16	FEB 28	MEDLINE/LMEDLINE reload improves functionality
NEWS	17	FEB 28	TOXCENTER reloaded with enhancements
NEWS	18	FEB 28	REGISTRY/ZREGISTRY enhanced with more experimental spectral property data
NEWS	19	MAR 01	INSPEC reloaded and enhanced
NEWS	20	MAR 03	Updates in PATDPA; addition of IPC 8 data without attributes
NEWS	21	MAR 08	X.25 communication option no longer available after June 2006
NEWS EXPRESS			FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005. V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT <a href="http://download.cas.org/express/v8.0-Discover/">http://download.cas.org/express/v8.0-Discover/</a>
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TOTAL

ENTRY

SESSION

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s (gamma-type pyridoxal phosphate enzymes)

805911 GAMMA

4916 GAMMAS

806071 GAMMA

(GAMMA OR GAMMAS)

1658769 TYPE

574761 TYPES

2103189 TYPE

(TYPE OR TYPES)

13514 PYRIDOXAL

54 PYRIDOXALS

13520 PYRIDOXAL

(PYRIDOXAL OR PYRIDOXALS)

537851 PHOSPHATE

125764 PHOSPHATES

586208 PHOSPHATE

(PHOSPHATE OR PHOSPHATES)

442972 ENZYMES

L1 0 (GAMMA-TYPE PYRIDOXAL PHOSPHATE ENZYMES)

(GAMMA(W) TYPE(W) PYRIDOXAL(W) PHOSPHATE(W) ENZYMES)

=> s (pyridoxal phosphate enzymes)

13514 PYRIDOXAL

54 PYRIDOXALS

13520 PYRIDOXAL

(PYRIDOXAL OR PYRIDOXALS)

537851 PHOSPHATE

125764 PHOSPHATES

586208 PHOSPHATE

(PHOSPHATE OR PHOSPHATES)

442972 ENZYMES

L2 82 (PYRIDOXAL PHOSPHATE ENZYMES)  
(PYRIDOXAL (W) PHOSPHATE (W) ENZYMES)

=> s L2 and uncinatum  
263 UNCINATUM  
L3 0 L2 AND UNCINATUM

=> s L2 and alkaloid  
53415 ALKALOID  
67894 ALKALOIDS  
81309 ALKALOID  
(ALKALOID OR ALKALOIDS)  
L4 0 L2 AND ALKALOID

=> s neotrophodium and L2  
192 NEOTYPHODIUM  
L5 0 NEOTYPHODIUM AND L2

=> s l2 and fungal  
48730 FUNGAL  
8 FUNGALS  
48734 FUNGAL  
(FUNGAL OR FUNGALS)  
L6 0 L2 AND FUNGAL

=> s Spiering  
7 SPIERING  
2 SPIERINGS  
L7 9 SPIERING  
(SPIERING OR SPIERINGS)

=> d 1-9 abs,so,ti

L7 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

AB Single-mol. fluorescence resonance energy transfer and functional assays have been used to study the initiation and regulation of the bacteriophage T4 DNA replication system. Previous work has demonstrated that a complex of the helicase loading protein (gp59) and the DNA polymerase (gp43) on forked DNA totally inhibits the polymerase and exonuclease activities of gp43 by a mol. locking mechanism (Xi, J., Zhuang, Z., Zhang, Z., Selzer, T., **Spiering**, M. M., Hammes, G. G., and Benkovic, S. J. (2005) Biochem. 44, 2305-2318). We now show that this complex is "unlocked" by the addition of the helicase (gp41) with restoration of the DNA polymerase activity. Gp59 retains its ability to load the helicase while forming a gp59-gp43 complex at a DNA fork in the presence of the single-stranded DNA binding protein (gp32). Upon the addition of gp41 and MgATP, gp59 dissociates from the complex, and the DNA-bound gp41 is capable of recruiting the primase (gp61) to form a functional primosome and, subsequently, a fully active replisome. Functional assays of leading- and lagging-strand synthesis on an active replication fork show that the absence of gp59 has no effect on the coupling of leading- and lagging-strand synthesis or on the size of the Okazaki DNA fragments. We conclude that gp59 acts in a manner similar to the clamp loader to ensure proper assembly of the replisome and does not remain as a replisome component during active replication.

SO Biochemistry (2005), 44(21), 7747-7756  
CODEN: BICHAW; ISSN: 0006-2960

TI Interaction between the T4 Helicase Loading Protein (gp59) and the DNA Polymerase (gp43): Unlocking of the gp59-gp43-DNA Complex to Initiate Assembly of A Fully Functional Replisome

L7 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

AB The name of the sixth author, Barry A. **Spiering**, was misspelled.

SO Medicine & Science in Sports & Exercise (2004), 36(2), 349  
CODEN: MSPEDA; ISSN: 0195-9131

TI Effect of muscle oxygenation during resistance exercise on anabolic hormone response. [Erratum to document cited in CA140:193472]

L7 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

AB The Monte Carlo entropic sampling method previously presented is adapted here to an Ising-like system with short- and long-range interactions. Such model is suited to spin crossover solids where the long interaction is due to elastic coupling mediated by the lattice, while the short-range interaction originates from the bonding between the spin crossover units [J. Linares, H. **Spiering**, F. Varret, Eur. J. Phys. B 10(1999) 271]. Taking into account the different degeneracies g<sub>HS</sub> for high-spin (HS) and g<sub>LS</sub> for low-spin (LS) states, the Ising Hamiltonian associated with fictitious spins is written:  $H = -h \sum_i \sigma_i - J \sum_{i,j} \sigma_i \sigma_j$  with  $h = -\Delta + k_B T \ln g_{HS} g_{LS}^{-2} + G \langle \sigma \rangle$  where J and G are the short- and long-range interactions, resp., and Δ the energy gap of ligand field such that the LS state is the ground state. The numerical method was tested successfully by comparison to the exact solution for a 1-dimensional system: [Fe(Htrz)<sub>2</sub>(trz)](BF<sub>4</sub>)<sub>2</sub> []. The authors describe here the results obtained for 2-dimensional systems, and show that the squareness of the thermal hysteresis loop, associated with the spin-transition, can be correlated to the strength of short-range interactions.

SO Polyhedron (2003), 22(14-17), 2453-2456  
CODEN: PLYHDE; ISSN: 0277-5387

TI Monte Carlo entropic sampling applied to spin crossover solids: the squareness of the thermal hysteresis loop

L7 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

AB The phenomenon of thermal spin crossover in iron(II) complexes has been subject to vigorous research activities in recent years, with the ultimate goal of eventual tech. applications in switching and display devices. The changes of spin states with accompanying drastic changes in magnetic and optical properties upon variation of temperature or application of pressure or irradiation with light has been explored extensively, particularly in view of the cooperative interactions playing a decisive role in the solid state /1/. Remarkable progress has been made in the design and preparation of new spin crossover materials, new photophys. effects have been observed, studies of the spin transition behavior under pressure have yielded astonishing new results, structural investigations at variable temperature and after irradiation with light have permitted deeper insight into the lattice events accompanying the mol. switching processes. Some of the new results will be highlighted in this report. /1/ P. Gutlich, A. Hauser, H. **Spiering**, Angew. Chemical Int. Ed. Engl. 1994, 33, 2024-2054.

SO Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March 26-30, 2000 (2000), INOR-176 Publisher: American Chemical Society, Washington, D. C.  
CODEN: 69CLAC

TI New highlights in spin crossover studies.

L7 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

AB In theory, the hydration thermodyn. approach used for control of glass production in the Defense Waste Processing Facility should be applicable to virtually any situation in which glass is allowed to react with an aqueous medium. In this paper, the general approach has been modified for application to glass etching by aqueous HF. Using measurements made by G. **Spierings** (1991), who etched a wide variety of silicate and borosilicate compns. in 2.9 M HF, excellent agreement is found between the theory and the exptl. measurements.

SO Ceramic Transactions (1998), 87(Environmental Issues and Waste Management Technologies in the Ceramic and Nuclear Industries III), 489-497

CODEN: CETREW; ISSN: 1042-1122

TI Thermodynamic approach to glass etching by HF

L7 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

AB An Ising-type model for spin conversion, explicitly accounting for intramol. vibrations was studied. Each two level system is associated with  $p$  harmonic oscillators having two possible frequencies  $\omega(i)_{LS}$ ,  $\omega(i)_{HS}$ . The major advantage of this model is that it provides an excellent agreement with both the conversion curve and calorimetric data, in particular the entropy change upon spin conversion. With the help of Arrhenius plots, the predictions of the model are accurately compared to the literature exptl. data on the spin equilibrium curves. A very accurate Moessbauer study by Jacobi, **Spiering** and Gutlich, provides evidence for a small effect typical for vibrations. A novel example is given where the conversion curve is essentially monitored by vibrations; this originates from the extremely small value of the energy gap between HS and LS electro-vibrational ground states. However, in most cases, as a 1st approach, the low frequency approximation of the model can be used. Then the model reduces to a simple two-level model with addnl. degeneracies implicitly accounting for intramol. vibrations.

SO Journal de Physique I (1995), 5(6), 747-60

CODEN: JPGCE8; ISSN: 1155-4304

TI A simple Ising-like model for spin conversion including molecular vibrations

L7 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

AB The thermodyn. and kinetics of the HS .dblharw. LS equilibrium in the iron(II) spin-crossover complexes  $[\text{Fe}(\text{2-pic})_3](\text{PF}_6)_2$  (2-pic = 2-aminomethylpyridine), and  $[\text{Fe}(\text{6-mepy})_3\text{tren}](\text{PF}_6)_2$  (6-mepy = 6-methyl-2-pyridyl, tren = tris[4-[(6-methyl)-2-pyridyl]-3-aza-3-butenyl]amine) were studied by pressure dependent Moessbauer spectroscopy. The rate consts. for the HS .dblharw. LS intersystem crossing are determined by lineshape anal. of Moessbauer spectra. The evaluation and the essential features of quadrupole-quadrupole relaxation spectra are discussed. From thermodyn. anal. of the HS fractions the intermol. interaction consts.  $\Gamma$  and the volume changes of the lattice  $\Delta V_c$  associated with the spin-transition are derived. In  $[\text{Fe}(\text{2-pic})_3](\text{PF}_6)_2$ , which shows a very gradual spin-transition,  $\Gamma$  vanishes and a small  $\Delta V_c = 8 \text{ \AA}^3$  is found. For  $[\text{Fe}(\text{6-mepy})_3\text{tren}](\text{PF}_6)_2$ , which shows a steep spin-transition,  $\Gamma = 197 \text{ cm}^{-1}$  and  $\Delta V_c = 25 \text{ \AA}^3$  are derived. The activation energy of the exothermic HS  $\rightarrow$  LS conversion is pressure independent for the pic-complex, but decreases with increasing pressure for the tren-complex. This is a consequence of different activation vols.  $\Delta V_{HL\pm}$ . For  $[\text{Fe}(\text{6-mepy})_3\text{tren}](\text{PF}_6)_2$   $\Delta V_{JL\pm} = -22 \text{ \AA}^3$  was estimated. The thermodyn. and kinetic results are discussed within the lattice expansion model of H **Spiering** et al. (1982) who treated the lattice influence on the spin state conversion.

SO Journal of Physics and Chemistry of Solids (1989), 50(6), 587-97

CODEN: JPCSAW; ISSN: 0022-3697

TI Thermodynamics and kinetics of spin state conversion processes studied by pressure dependent Moessbauer spectroscopy

L7 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

AB A polemic with C. Srikantappa, C. Raith, and B. **Spiering** (ibid., 1985, 26, 249-72). At the Kabbaldurga area (India), H<sub>2</sub>O-fluid inclusions dominate the amphibolite-facies rocks. Since no partial melting took place, the structural and metamorphic setting of the Ponmudi charnockites are quite different from the Kabbaldurga occurrence, where partial melting was important. A body the size of the Closepet granite is unlikely to have originated by K metasomatism. The Closepet-type granites did not intrude only after charnockitization of gneisses. Fluid conditions must be studied to determine whether the influx of CO<sub>2</sub> was oxidizing or reducing.

SO Journal of the Geological Society of India (1988), 31(1), 166-71

CODEN: JGSIAJ; ISSN: 0016-7622

TI Progressive charnockitization of a leptynite-khondalite suite from Kerala, India. Evidence for formation of charnockites through decrease in fluid pressure? Comment

L7 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2006 ACS on STN

AB A polemic. The results reported by **Spierings** and Stein (ibid. 1975, 6, 265) on the effect of Na<sub>2</sub>O on hydration of C3A [12042-78-3] indicate that the authors are not aware of a series of (5) papers published by P. Gupta et. al.

SO Cement and Concrete Research (1977), 7(1), 105  
CODEN: CCNRAI; ISSN: 0008-8846

TI A discussion of the paper "The influence of sodium oxide on the hydration of C3A. I. Paste hydration", by G. A. C. M. **Spierings** and H. N. Stein